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Nov 21, 2000

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DOCUMENT-IDENTIFIER: US 6150921 A

TITLE: Article tracking system

DATE-ISSUED: November 21, 2000

INVENTOR-INFORMATION:

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APPL-NO: 08/ 953755 [PALM]

DATE FILED: October 17, 1997

PARENT-CASE:

REFERENCES TO RELATED APPLICATIONS This application claims priority from a provisional application Ser. No. 60/028,658, filed Oct. 17, 1996, a provisional application Ser. No. 60/044,321, filed Apr. 24, 1997, and a provisional application Ser. No. 60/044,245, filed Apr. 24, 1997.

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FIELD-OF-SEARCH: 340/825.54, 340/825.34, 340/825.49, 340/573.1, 340/573.4, 340/10.1, 342/42, 342/44

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ART-UNIT: 275

PRIMARY-EXAMINER: Horabik; Michael

ASSISTANT-EXAMINER: Dalencourt; Yves

ATTY-AGENT-FIRM: Hutchins, Wheeler & Dittmar

ABSTRACT:

System for tracking mobile tags. Cell controllers with multiple antenna modules
generate a ~~carrier signal~~ which is received by the tags. Tags shift the frequency
of the carrier signal, modulate an identification code onto it, and transmit the
resulting tag signal at randomized intervals. The antennas receive and process the
response, and determine the presence of the tags by proximity and triangulation.
Distance of a tag ~~from an antenna~~ is calculated by measuring the round trip signal
time. The cell controllers send data from the antenna to a host computer. The host
computer collects the data and resolves them into positional estimates. Data are
archived in a data warehouse, such as an SQL Server.

38 Claims, 23 Drawing figures

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